# NEW HYDROPTILIDAE (TRICHOPTERA) FROM NEW HAMPSHIRE.

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The present paper presents descriptions of two new species and of a previously undescribed female. The holotypes and some paratypes will be deposited in the Illinois Natural History Survey Museum. The remaining paratypes will be retained in the University of New Hampshire Entomological Collection, Durham, New Hampshire.

**Oxyethira rossi** n. sp.

Male: length from front of head to tip of wings 2.5 mm. Seventh sternite with a short, sharp apico-mesal spur. Eighth segment covered with numerous long setae, especially on the posterior half of the segment. Genitalia as in Fig. 1. Two rows of broad heavy spines present on the ventral surface of the ninth segment. These spines are situated on a circular sclerite just anterior to the claspers. Claspers fused on the meson, the fused portion projecting posteriorly as a sinuate, sclerotized rod, Fig 1A. In ventral view the claspers appear upsilon shaped. Above the claspers is a trilobed plate, each of the outer lobes being tipped with a short seta, Fig. 1B. The subgenital plate, in ventral view, appears as divided arms with a triangular lobe on the distal end of each arm. In lateral view the subgenital plate is broad at the base and tapers to a foot shaped distal end. The arms of the subgenital plate are connected ventro-basally. This ventro-basal connnection passes under the aedeagus. Aedeagus, Fig. 1A, 0.5 mm. long; the spiral process encircles the aedeagus two and one-half times and extends to the end of the main part of the aedeagus.

The aedeagus of this species is similar to *O. novasota* Ross and others having an entwined spiral process. However, it is easily recognized by the peculiarly fused claspers and the shape of the divided subgenital plate.

Holotype male: Bow, N. H. August 5, 1951, light trap.

This species is named in honor of Dr. H. H. Ross in recognition of his invaluable help in our studies of Trichoptera.

*Orthotrichia instabilis* Denning

This species has been recorded from Florida. Recently a series

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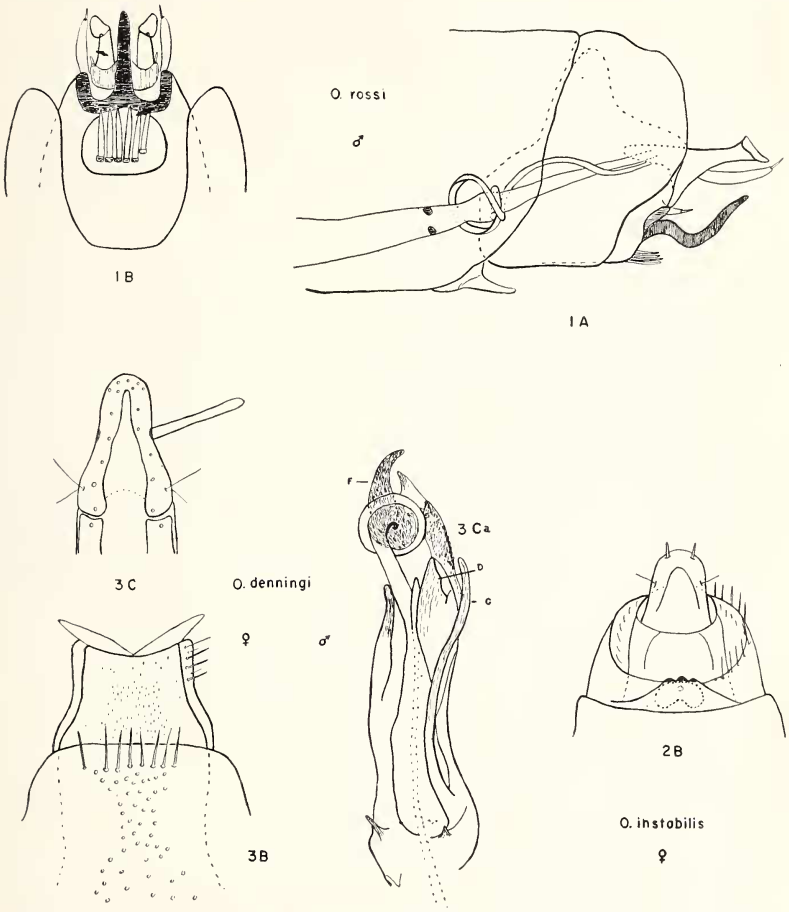
BULL. B. E. S. VOL. LII PLATE IV




Oxyethira, Ochrotrichia and Orthotrichia genitalia. A, lateral view. B, ventral. C, tenth segment, dorsal. Ca, tenth tergite, dorsal.

of specimens have been taken in New Hampshire with the following locality records. Durham, June 16 to August 21, 8 males and 2 females; Lee, July 4 to July 30, 5 males and 10 females; light trap.

Female: genitalia Fig. 2, the eighth sternite with median process flared out. The median process divided into three lobes; the two outer lobes more heavily sclerotized. This species differs from *O. americana* Banks by having the median process of the eighth sternite three lobed. It differs from *O. cristata* Morton in having the median process flared and the mesal portion of the eighth sternite membranous, in addition to the above trilobed mesal process.

Allotype, female. Lee, N. H. July 12, 1948, light trap.

**Ochrotrichia denningi** n. sp.

Male: length 2.5–3.0 mm. This species is closely related to *O. anisca* (Ross). Tenth tergite, Fig. 3Ca. Process C, slender, extending to tip of process D. Process D, short and stout, about one half its length from the spiral. Process F, as long as width of spiral, no shoulder or process at base of F. A row of small teeth on process E at apex of process C. Two heavily pigmented spines are present at the base of the tenth tergite; one at the base of process B and the other near the base of process C. This species differs from the closely related *O. anisca* (Ross) and *O. contorta* (Ross) by process C being more slender and extending to apex of D; process F without a shoulder or tooth at base and extending a shorter distance beyond the spiral.

Holotype, male: Plymouth, N. H. June 9, 1948, light trap.

Paratypes, males: Plymouth, N. H. June 9, 1948, 2 males; June 10, 1948, 1 male; June 30, 1953, 8 males; July 16, 1956, 1 male.

Female: length as for male; this species is similar to *O. shawnee* (Ross) and *O. anisca* (Ross). Eighth sternite, Fig. 3B, with long broad hairs arranged in an hour-glass pattern; these hairs are numerous on the apical and mesal surface; on the basal surface the hairs are fewer and more widely scattered. Internal structure of eighth segment appears reticulated at 100× magnification. Tenth tergite, Fig. 3C, with cerci approximately two thirds as long as terminal part of segment. A pair of small bristles present at base of terminal portion of tenth tergite.

Allotype, female; Plymouth, N. H., June 9, 1948, light trap.

This species is named in honor of Doctor D. G. Denning, an outstanding student of Trichoptera.

Light traps have been operated at various localities in the state for the past ten years. It is interesting to note that this species has been taken only at Plymouth, N. H.